

POWESHIEK COUNTY

PCC Pavement - Grade and New
HSIPX-146-2(44)--3L-79

LETTING DATE
10-18-2022

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Crossing Plan & Profile
* D.2	Entrance Plan & Profile
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
POWESHIEK COUNTY
PCC Pavement - Grade and New
Co Rd F62 Intersection near Searsboro

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS	TOTAL
	..

PROJECT IDENTIFICATION NUMBER
21-79-146-020
PROJECT NUMBER
HSIPX-146-2(44)--3L-79
R.O.W. PROJECT NUMBER

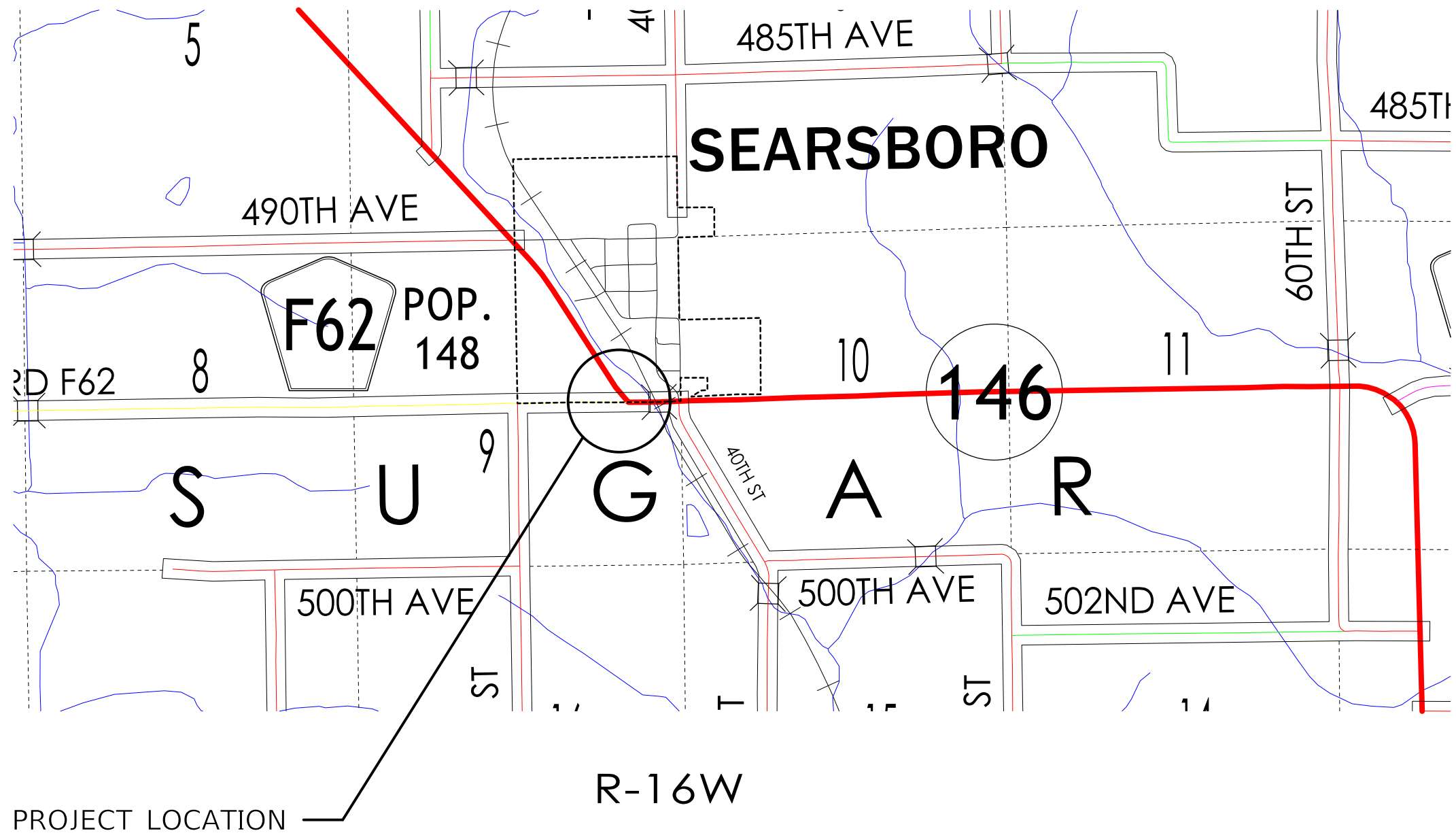
D5 PLAN – Date: Sept. 22, 2022

DESIGN DATA RURAL	
20 -- AADT	-- V.P.D.
20 -- AADT	-- V.P.D.
20 -- DHV	-- V.P.H.
TRUCKS	-- %
Total	
Design ESALs	--

INDEX OF SEALS		
A.1	Allison Smyth	Primary Signature Block

PRELIMINARY PLANS

Subject to change by final design.

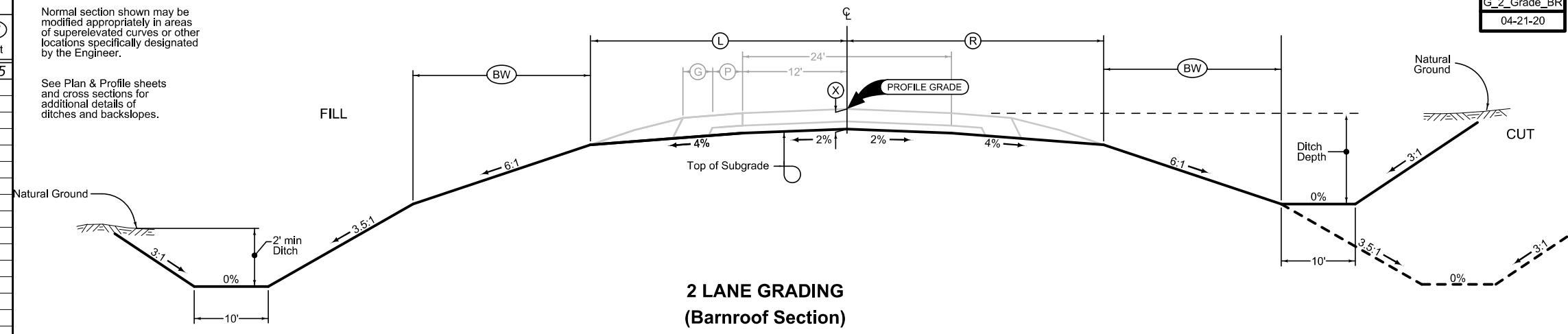


NOT TO SCALE

LOCATION		DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION	(L) Feet	(R) Feet	(X) Inches	(BW) Feet
ML IA 146	2523+64 2528+60±	47.5	47.5	18	11.25

Normal section shown may be modified appropriately in areas of super-elevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

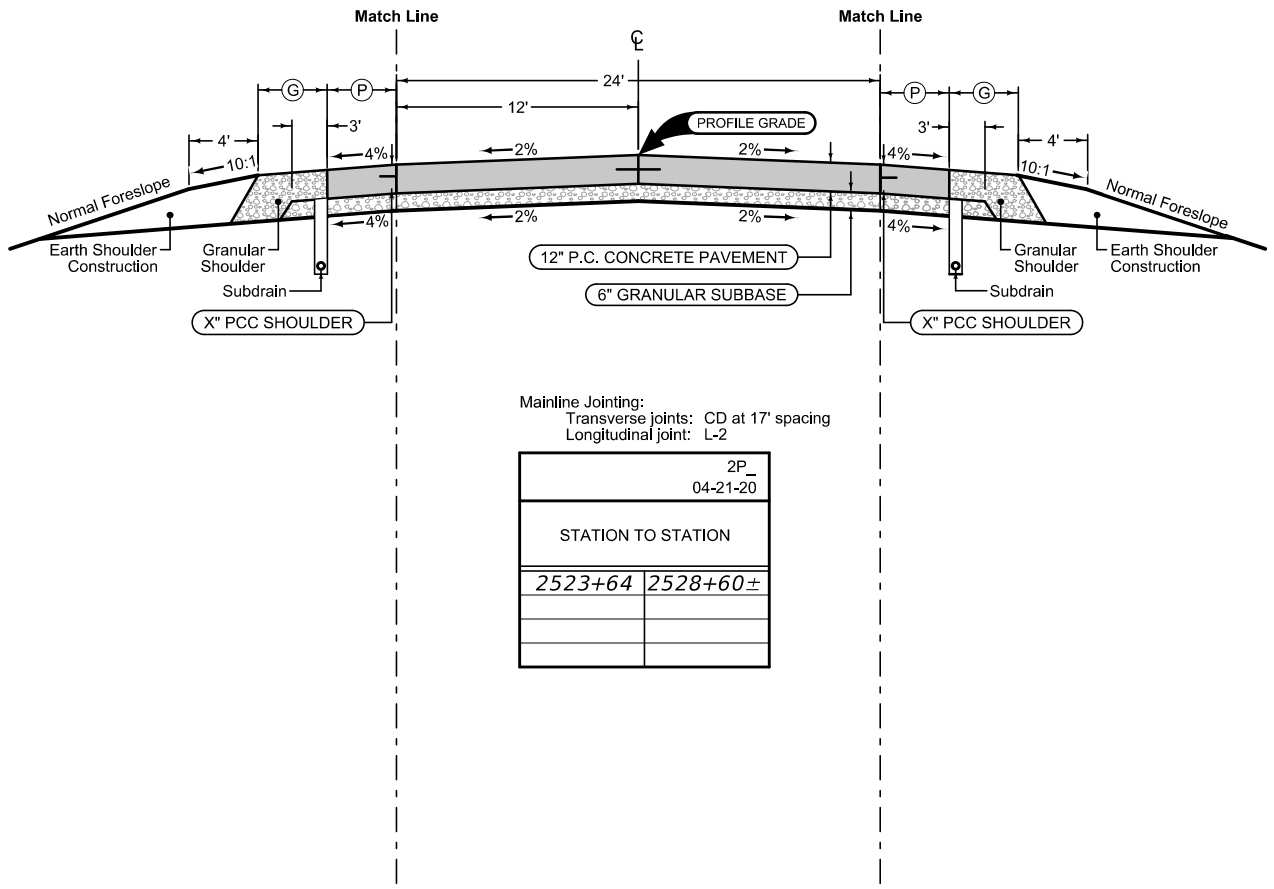


2 LANE GRADING (Barnroof Section)

Full Depth PCC Combination Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 17' spacing

2_C_FullPCC_04-21-20			
STATION TO STATION	(P) Feet	(G) Feet	
2523+64 2528+60±	2	4	



Mainline Jointing:
Transverse joints: CD at 17' spacing
Longitudinal joint: L-2

2P_04-21-20	
STATION TO STATION	
2523+64	2528+60±

Full Depth PCC Combination Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 17' spacing

2_C_FullPCC_04-21-20			
STATION TO STATION	(P) Feet	(G) Feet	
2523+64 2528+60±	2	4	

103-6
10-17-17

EMBANKMENT WITH MOISTURE CONTROL

Moisture Control is required for all Class 10 fill placed in all locations and depths. Stability berms placed outside the normal foreslope template and topsoil will not require Moisture Control.

103-7
08-01-08

SHRINKAGE DATA

Material	%	Remarks
Topsoil	40%	
Class 10	30%	
Boulders		5 CY

103-10
04-18-17

TOPSOIL STRIPPING AND PLACEMENT

Location				Topsoil Stripping Thickness	Topsoil Placement Thickness	Remarks
Road Identification	Dir. of Traffic	Begin Station	End Station	IN	IN	
IA 146		2523+64.00	2528+60.00	6.0	4.0	

104-9
10-17-17


LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

* Not a bid item. Bridge berm quantities assume a trench depth of 24 inches.

Line No.	Road or Lane Identification	Location		Side	Depth ⊙ IN	Longitudinal Subdrain (DR-303)				Subdrain Outlet		Porous* Backfill CY	Class "A" Crushed Stone CY	Remarks		
		Station to Station	Shoulder			Backslope		Bridge Berm (EW-203 or EW-204)		DR-303, DR-305 or DR-306						
			IN			IN	FT	IN	FT	Standard Road Plan and Type	IN				FT	Station
1	IA 146	2523+64.00	2528+60.00	LT	42.0	4.0	556.0					2523+64.00	DR-306	51.5	0.2	
												2528+60.00	DR-306		0.2	
2	IA 146	2523+64.00	2528+60.00	RT	42.0	4.0	556.0					2523+64.00	DR-306	51.5	0.2	
												2528+60.00	DR-306		0.2	
Totals							1112.0		0.0				DR-306 = 4	103.0	0.8	
NOTE: ALL LONGITUDINAL SUBDRAINS ARE TYPE 7 WITH PCC OR TYPE 8 WITH HMA (ACC) UNLESS OTHERWISE NOTED IN REMARKS COLUMN.																
NOTE: ALL LONGITUDINAL SUBDRAIN MAY BE ADJUSTED BOTH VERTICALLY AND HORIZONTALLY IN THE FIELD AS NECESSARY.																

GEOTECHNICAL DESIGN



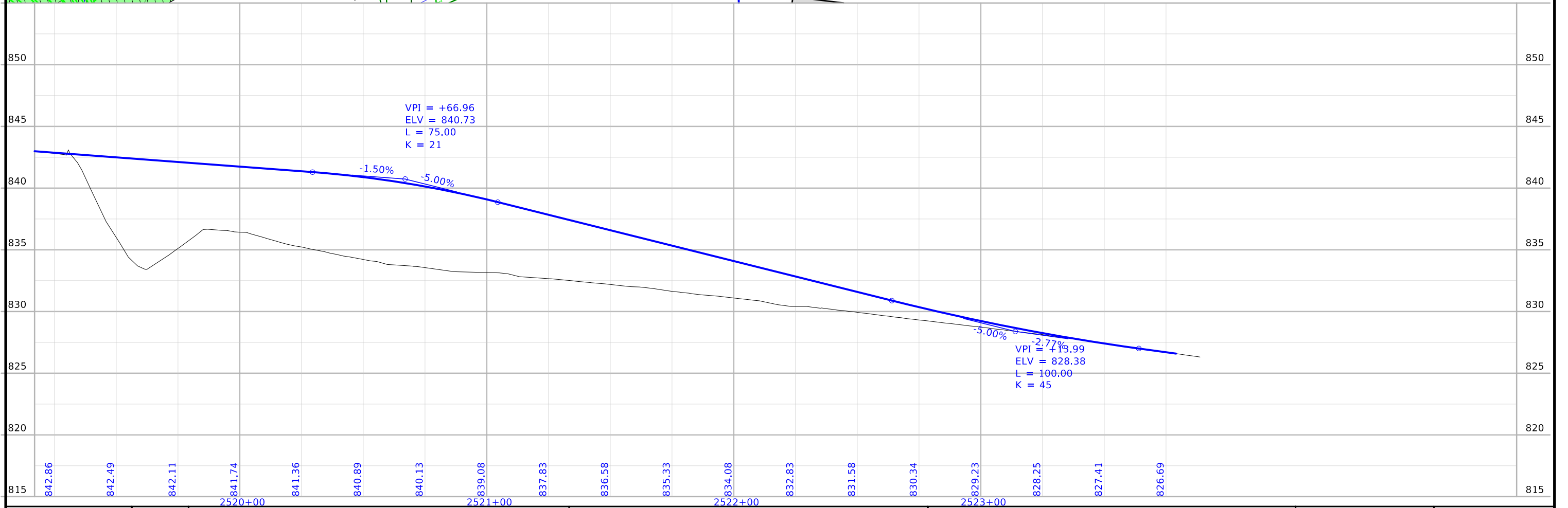
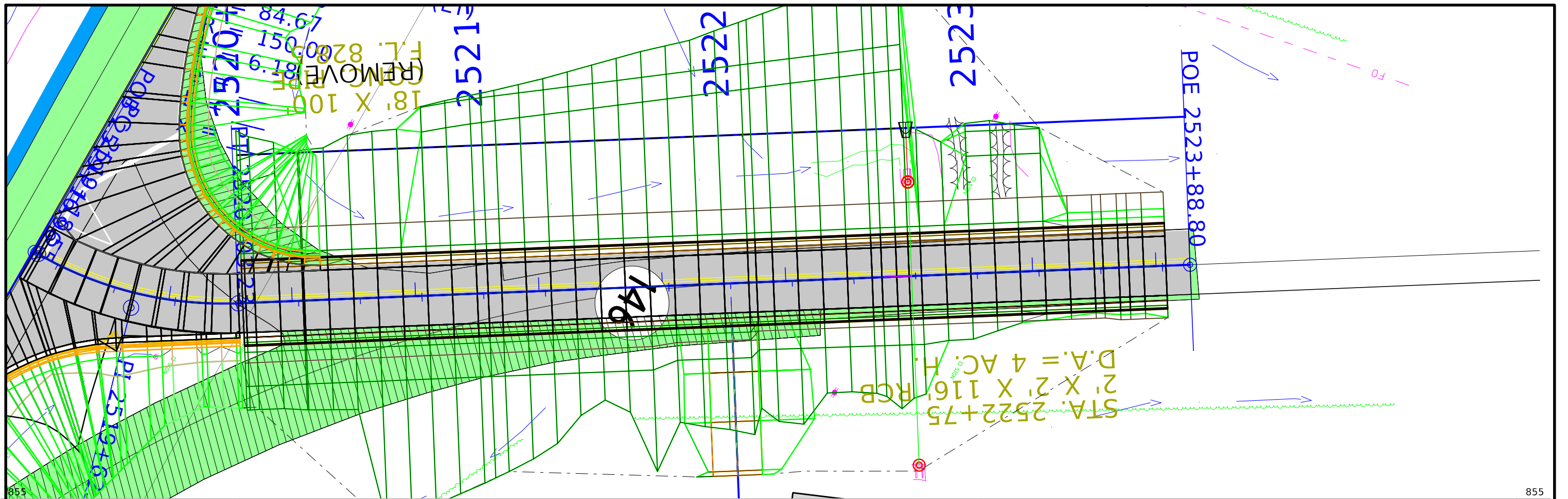
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: Mark A Dell Date: 7/1/22

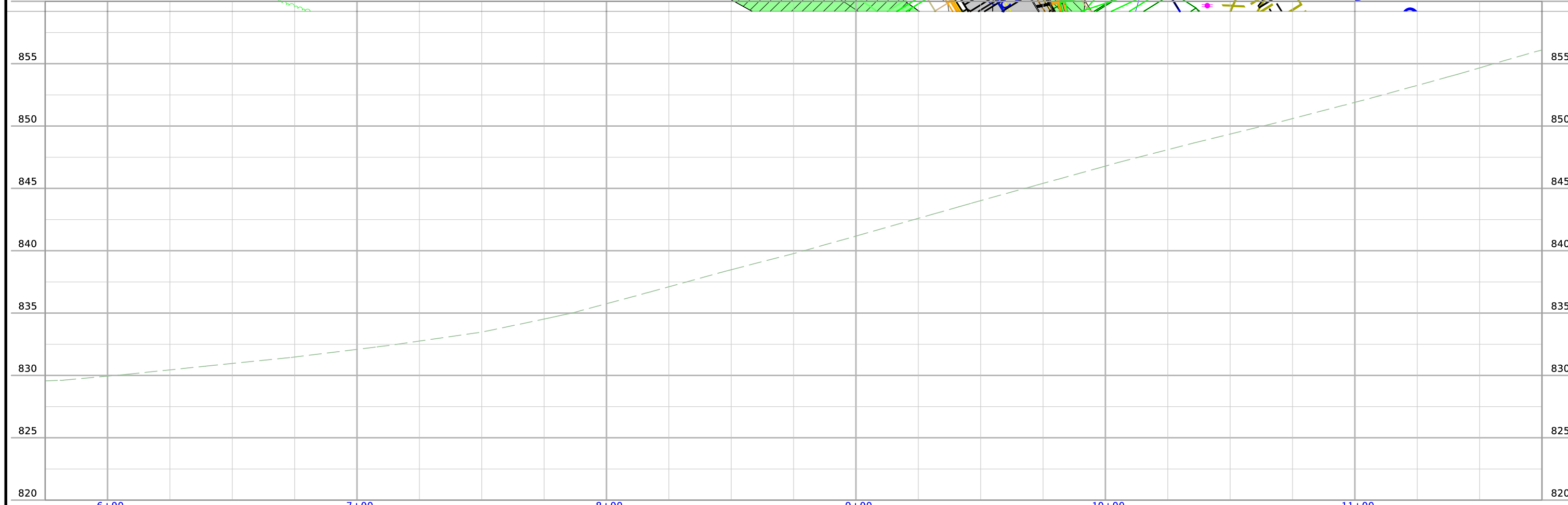
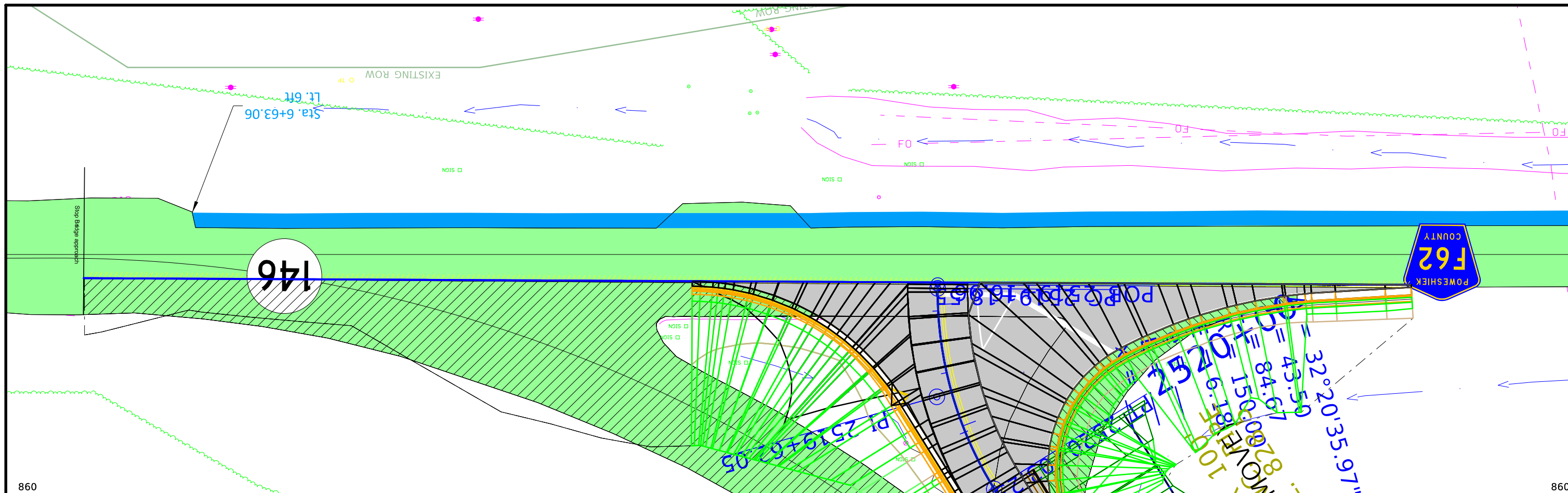
Printed or Typed Name: Mark A. Dell

My license renewal date is December 31, 20 23

Pages or sheets covered by this seal: CS.1 & Q.1-Q.3



FILE NO.	ENGLISH	DESIGN TEAM	POWESHIEK COUNTY	PROJECT NUMBER	SHEET NUMBER
		Smyth/Narigon/Ringgenberg		HSIPX-146-2(44)--3L-79	D.1



FILE NO.	ENGLISH	DESIGN TEAM Smyth/Narigon/Ringgenberg	POWESHIEK COUNTY	PROJECT NUMBER HSIPX-146-2(44)--3L-79	SHEET NUMBER D.2
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SURVEY SYMBOLS

- | | | | |
|--|-----------------------------------|--|------------------------------|
| | Interstate Highway Symbol | | Septic Tank |
| | U.S. Highway Symbol | | Cistern |
| | Iowa Highway Symbol | | L.P. Gas Tank (No Footing) |
| | County Road Highway Symbol | | Underground Storage Tank |
| | Evergreen Tree | | Latrine |
| | Deciduous Tree | | Satellite TV Dish |
| | Fruit Tree | | Water Hook Up |
| | Shrub (Bushes) | | Radio Tower |
| | Timber | | Tower Anchor |
| | Hedge | | Guardrail (Beam or Cable) |
| | Stump | | Guard Post (one or two) |
| | Swamp | | Guard Post (over two) |
| | Rock Outcrop | | Filler Pipe |
| | Broken Concrete | | Gas Valve |
| | Revetment (Rip Rap) | | Water Valve |
| | Cemetery | | Speed Limit Sign |
| | Grave | | Mile Marker Post |
| | Cave | | Sign |
| | Sink Hole | | Traffic Signal Control Box |
| | Board Fence | | Rail Road Signal Control Box |
| | Chain Link or Security Fence | | Telephone Switch Box |
| | Wire Fence | | Electric Box |
| | Terrace | | |
| | Earth Dam or Dike (Existing) | | |
| | Tile Outlet | | |
| | Edge of Water | | |
| | Existing Drainage | | |
| | Right of Way Rail or Lot Corner | | |
| | Concrete Monument | | |
| | Well | | |
| | Windmill | | |
| | Beehive Intake | | |
| | Existing Intake | | |
| | Existing Utility Access (Manhole) | | |
| | Fire Hydrant | | |
| | Water Hydrant (Rural) | | |

UTILITY LEGEND

PLAN VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Purple (Halo)	(15)		Backslope Drains
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
SHADING		Design Color No.	
Brown, Light	(236)		Core Out

PROFILE VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK		Design Color No.	
Blue	(1)		Proposed Alignment, Stationing, and Alignment Annotation
Green	(2)		Existing Ground Line Profile
Green, Med	(2)		Topsoil
Green, Med	(2)		Slope Dressing Only
Orange	(6)		Loam
Aqua (Cyan)	(7)		Class 10
Brown, Med	(4)		Sand
Red	(3)		Unsuitable A
Pink, Dark	(13)		Unsuitable B
Pink	(11)		Unsuitable C
Red	(3)		Shale
Red	(3)		Waste
Gray, Light	(48)		Broken and Weathered Rock
Gray, Med	(80)		Rock
Gray, V.Dark	(128)		Boulders

PATTERN AND SYMBOL LEGEND OF SOILS SHEETS

	Drill		Dig/Core	Date(s) Drilled _____	
	Water		Treatment		Sandstone
	Dry		Sand Blanket		Unsuitable A
	Sample		Soil Remediation Area		Unsuitable B
	Plugged		Select Soil		Unsuitable C
	Moisture		Select Sand		Sandy Soil
	Shelby		Slope Dressing Only		Boulders
	Blow Count		Broken and Weathered Rock		Shale
	Dens. Core		Rock		

	Reference Point		Survey Line
	Station		Section Corner
	Ground Line Intercept		Saw Cut
	Guardrail		Clearing & Grubbing Area
	Pavement Removal		Pavement Removal

RIGHT-OF-WAY LEGEND

	Proposed Right-of-Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Borrow
	Easement (Temporary)
	Easement
	Excess
	A/C Access Control

NOTE: Sounding and test boring data shown in the plans were accumulated for designing and estimating purposes. Their appearance on the plans does not constitute a guarantee that conditions other than those indicated will be encountered. Details and notes shown elsewhere shall be used for roadway and structure construction.

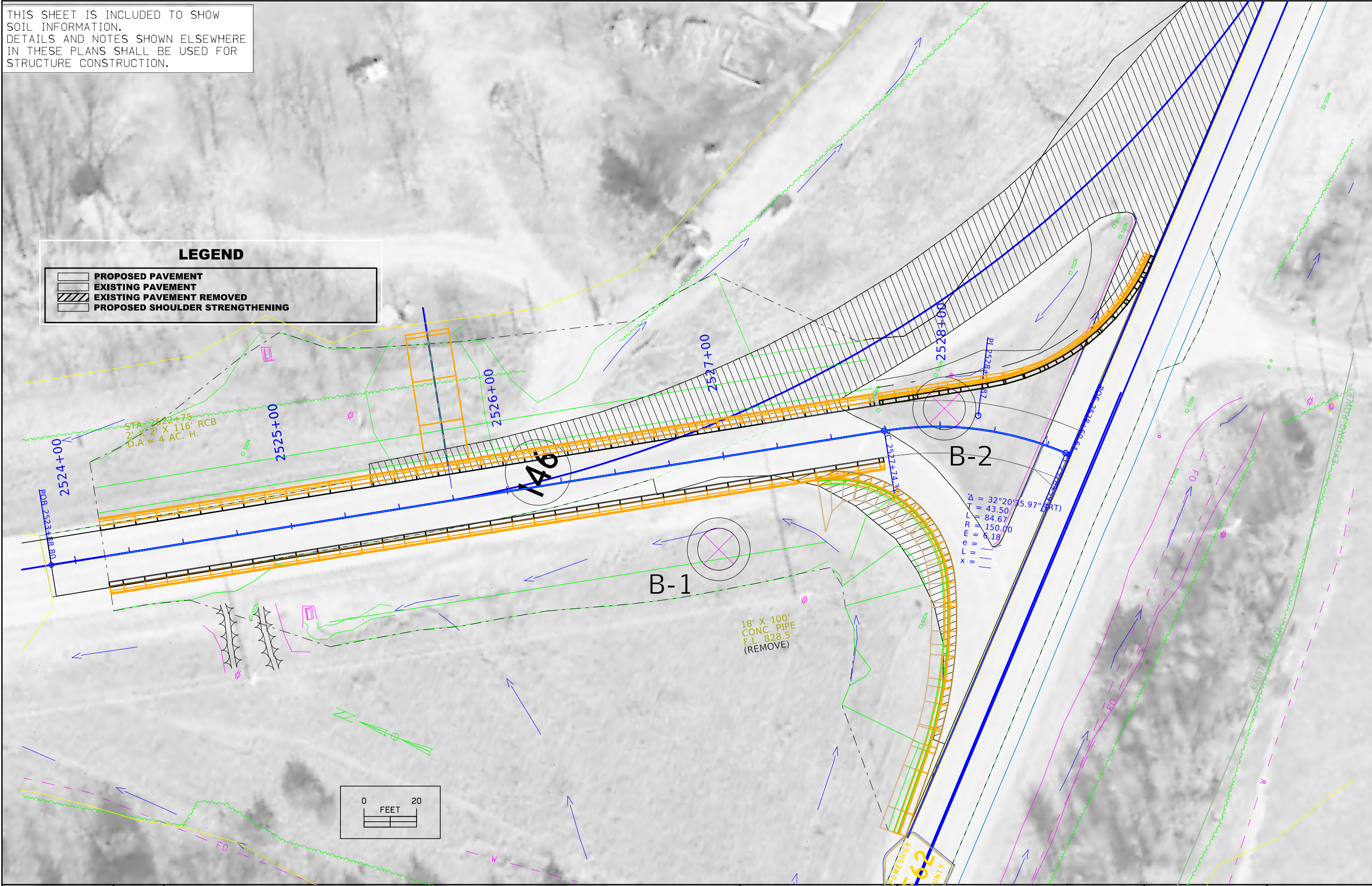
SOILS LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES Q)

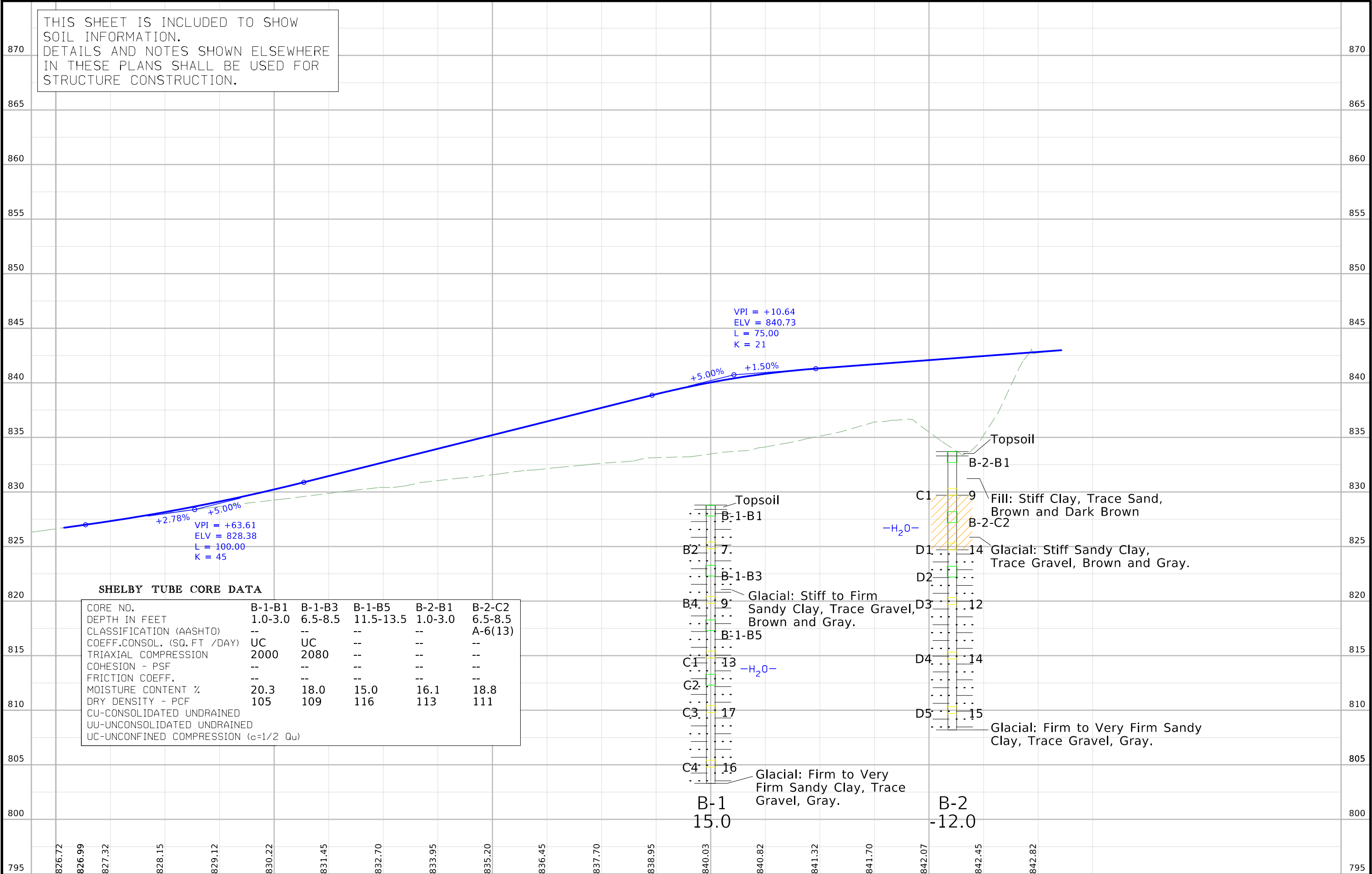
THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION. DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

LEGEND

	PROPOSED PAVEMENT
	EXISTING PAVEMENT
	EXISTING PAVEMENT REMOVED
	PROPOSED SHOULDER STRENGTHENING



THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION. DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.



VPI = +63.61
ELV = 828.38
L = 100.00
K = 45

VPI = +10.64
ELV = 840.73
L = 75.00
K = 21

SHELBY TUBE CORE DATA

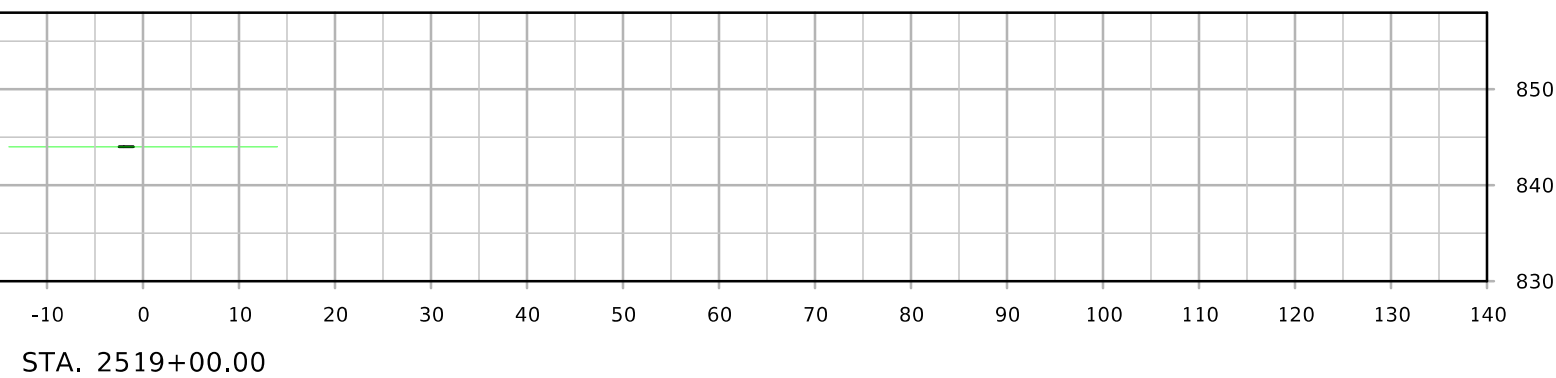
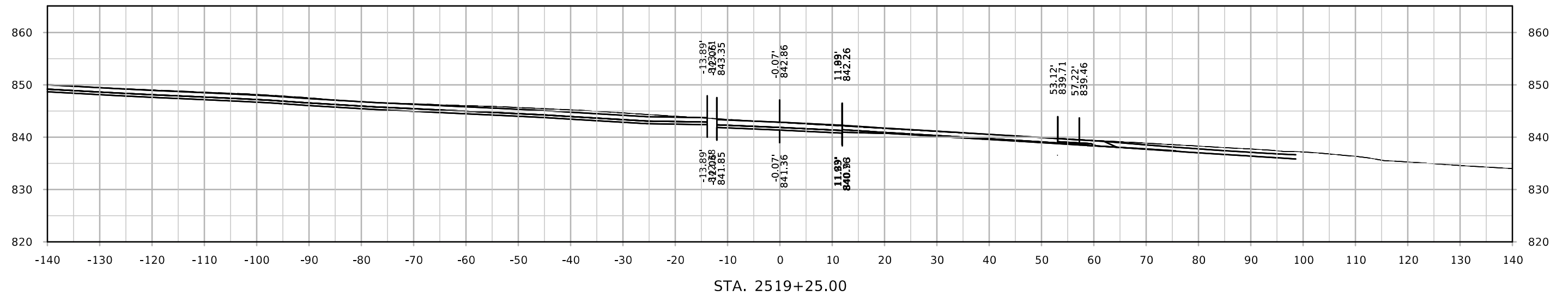
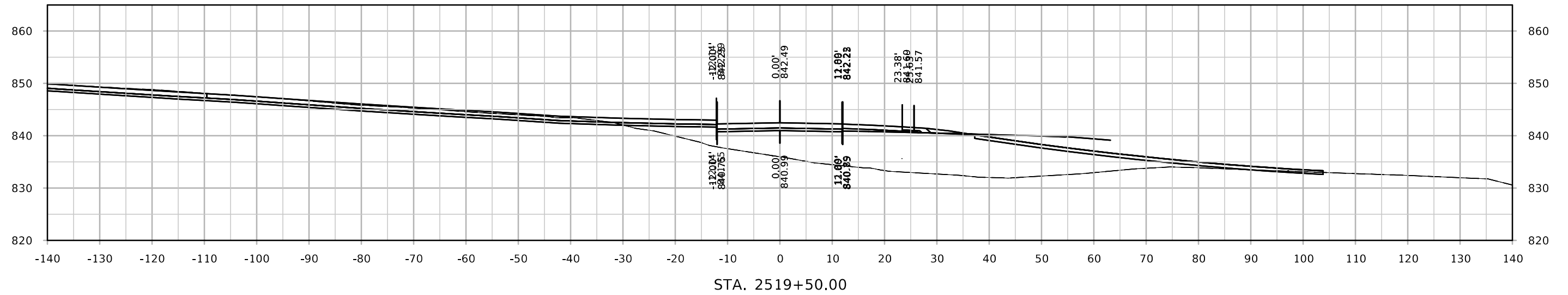
CORE NO.	B-1-B1	B-1-B3	B-1-B5	B-2-B1	B-2-C2
DEPTH IN FEET	1.0-3.0	6.5-8.5	11.5-13.5	1.0-3.0	6.5-8.5
CLASSIFICATION (AASHTO)	--	--	--	--	A-6(13)
COEFF. CONSOL. (SQ. FT / DAY)	UC	UC	--	--	--
TRIAxIAL COMPRESSION	2000	2080	--	--	--
COHESION - PSF	--	--	--	--	--
FRICTION COEFF.	--	--	--	--	--
MOISTURE CONTENT %	20.3	18.0	15.0	16.1	18.8
DRY DENSITY - PCF	105	109	116	113	111
CU-CONSOLIDATED UNDRAINED					
UU-UNCONSOLIDATED UNDRAINED					
UC-UNCONFINED COMPRESSION (c=1/2 Qu)					

Topsoil
B-1-B1
B-2
B-1-B3
B-4
B-1-B5
C1
C2
C3
C4
B-1
15.0

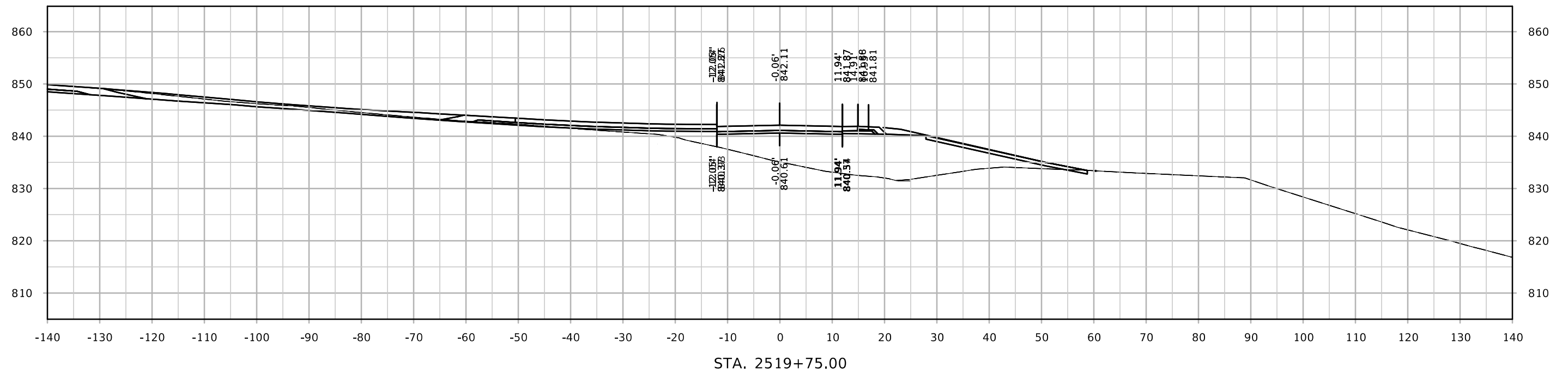
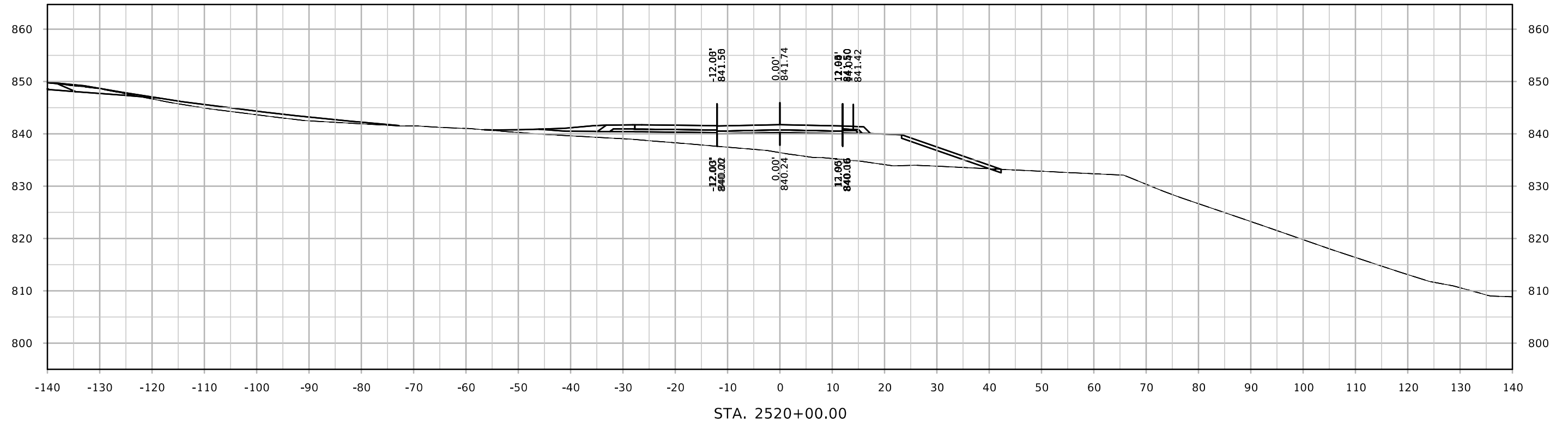
Topsoil
B-2-B1
B-2-C2
C1
D1
D2
D3
D4
D5
B-2
-12.0

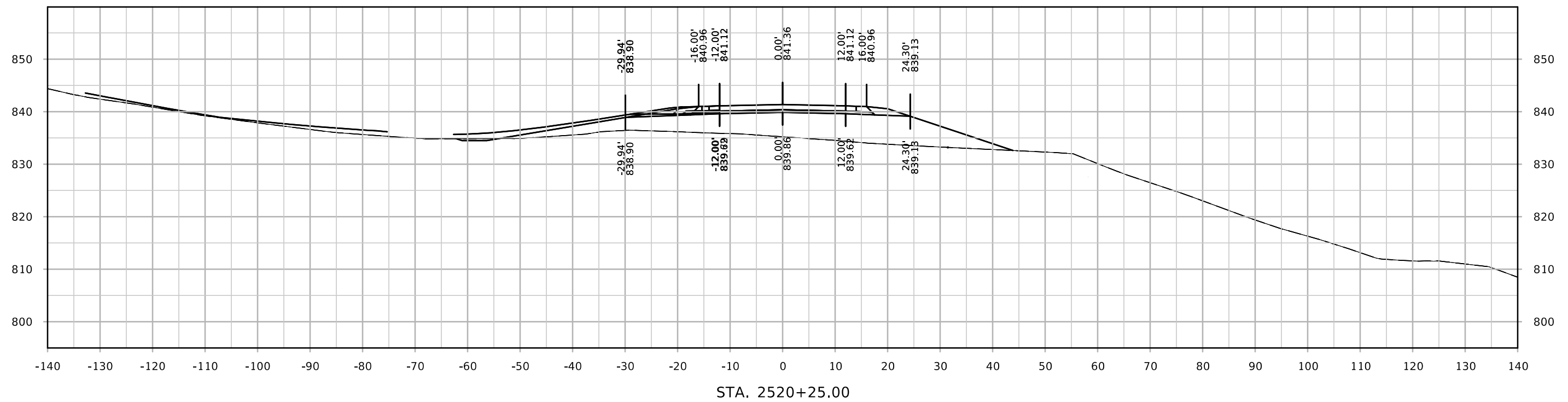
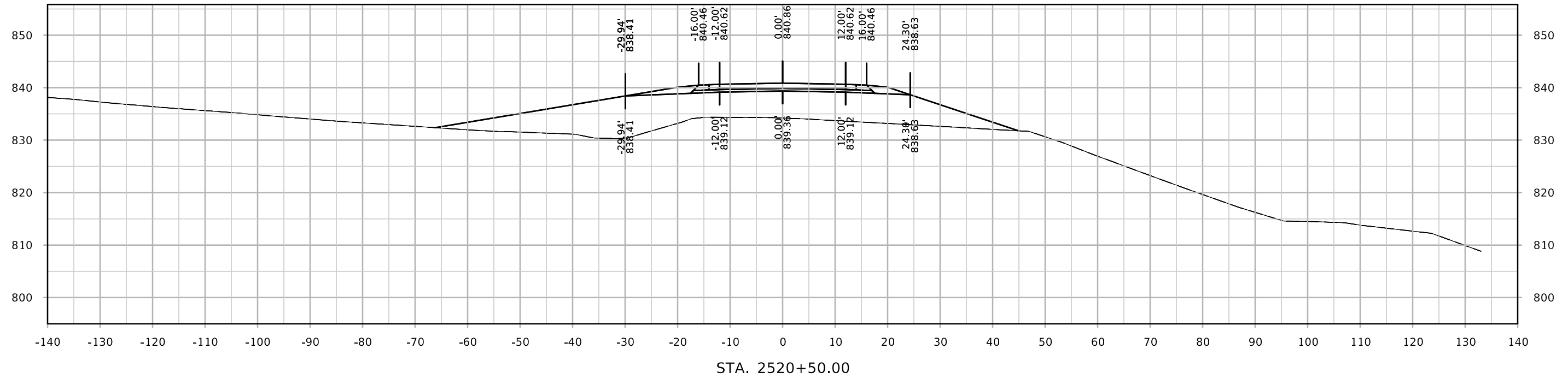
Fill: Stiff Clay, Trace Sand, Brown and Dark Brown
Glacial: Stiff Sandy Clay, Trace Gravel, Brown and Gray.
Glacial: Firm to Very Firm Sandy Clay, Trace Gravel, Gray.
Glacial: Firm to Very Firm Sandy Clay, Trace Gravel, Gray.

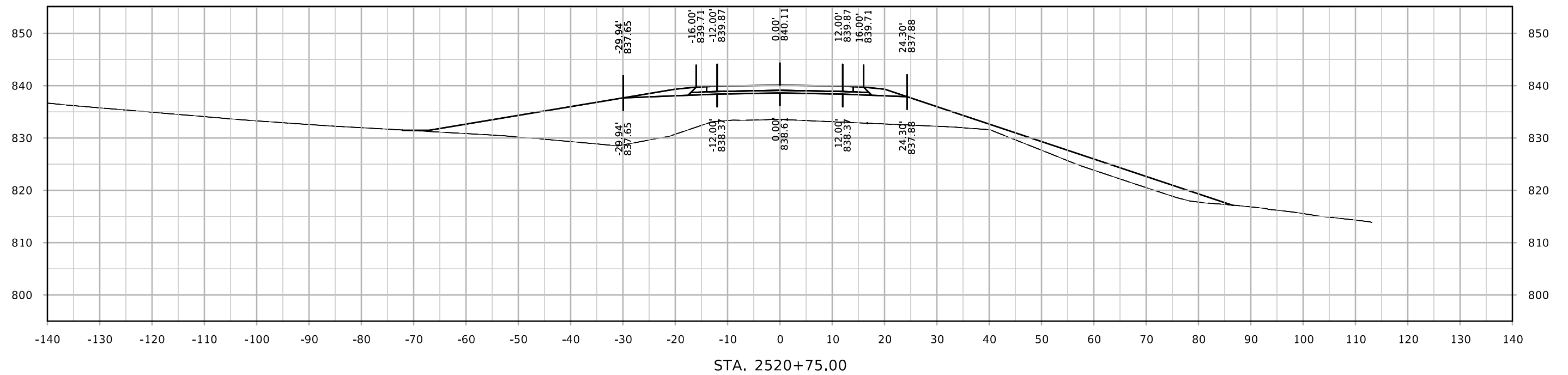
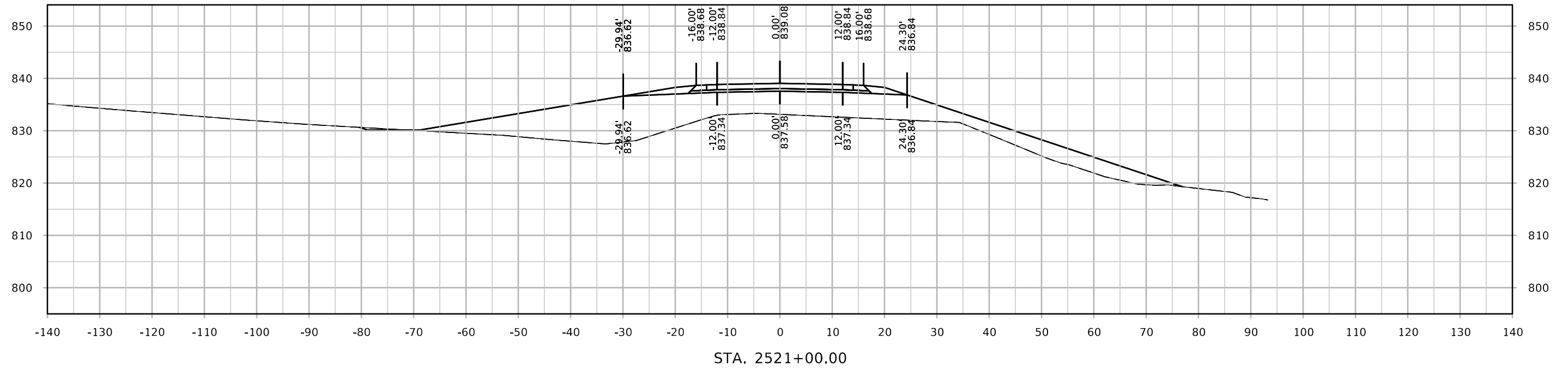
-H₂O-



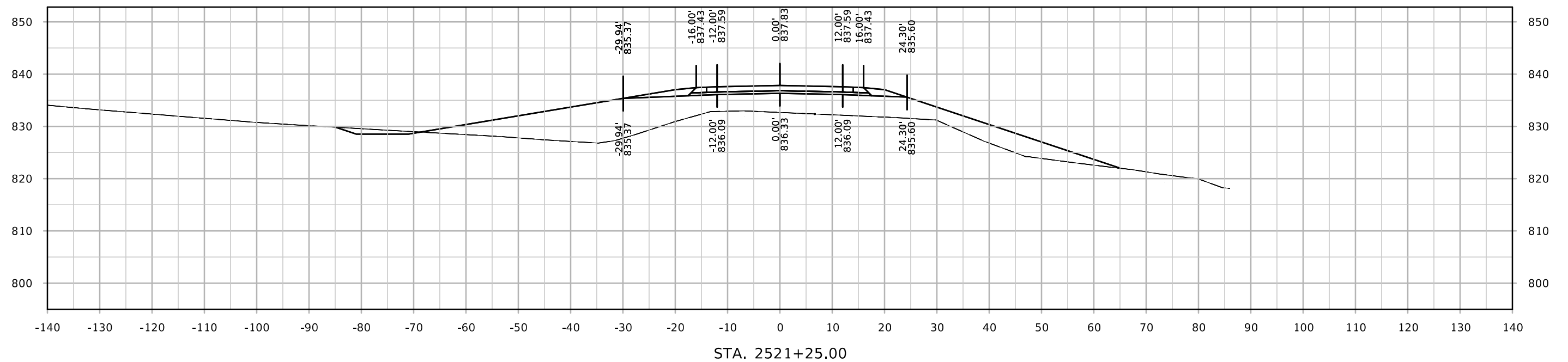
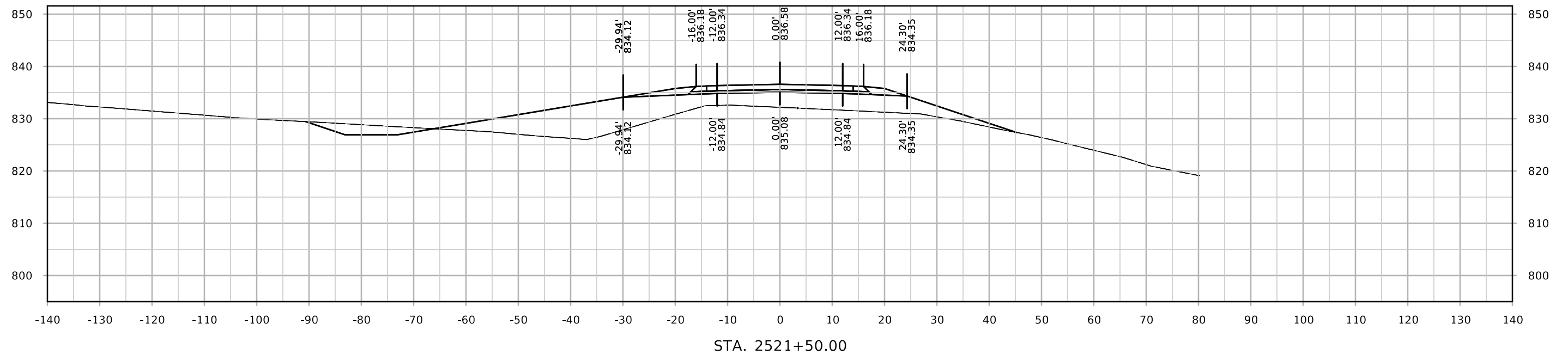
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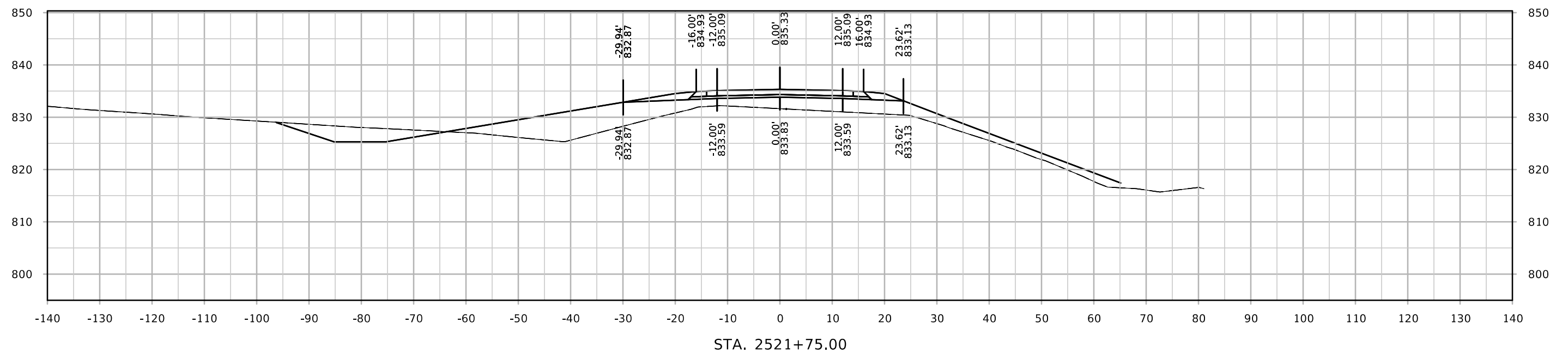
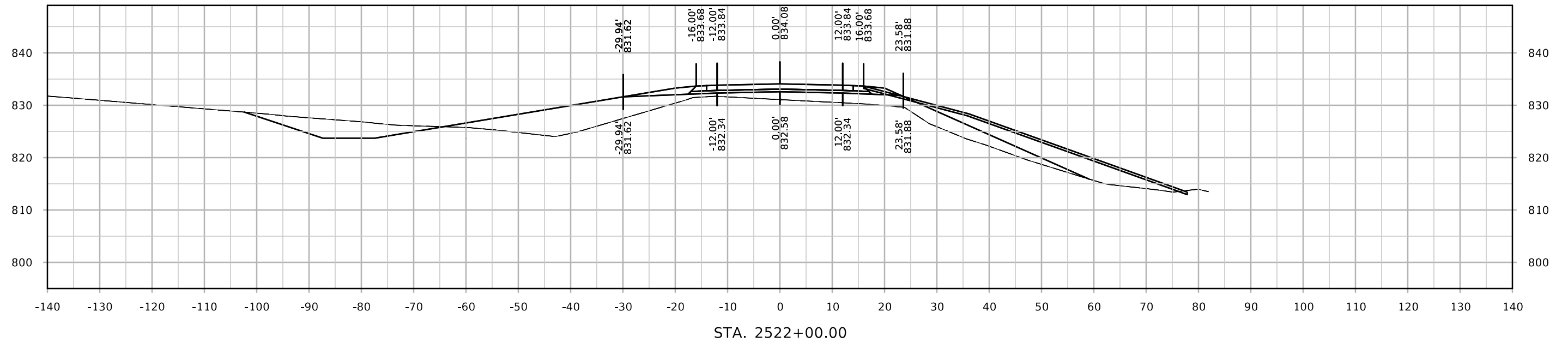




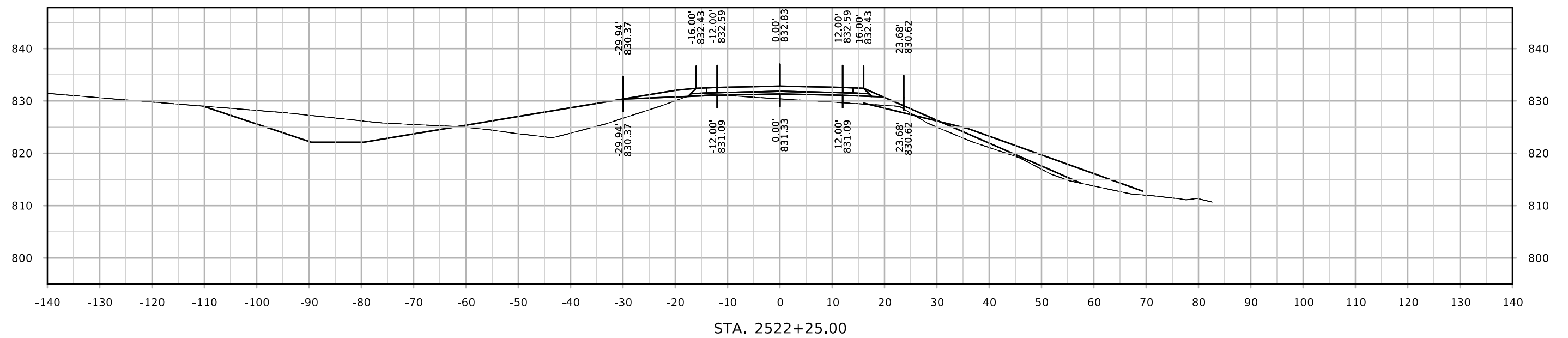
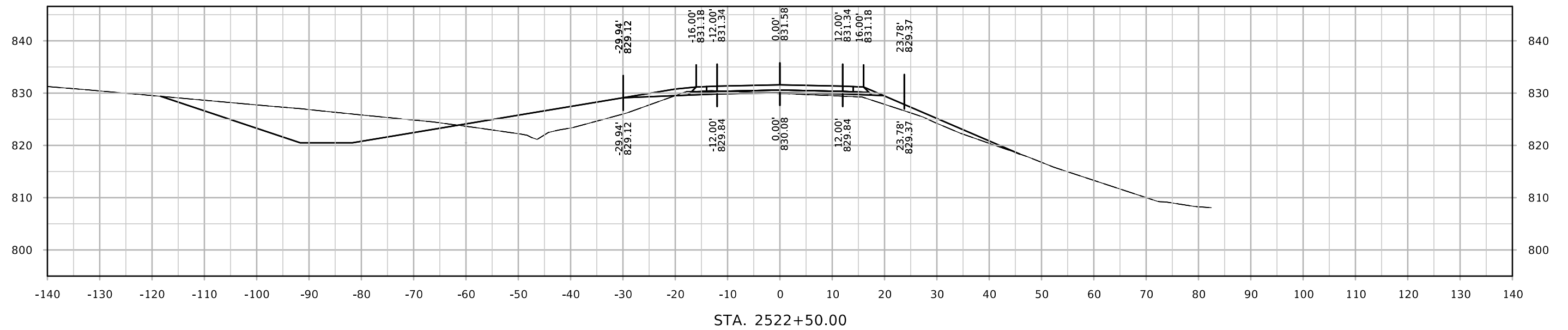
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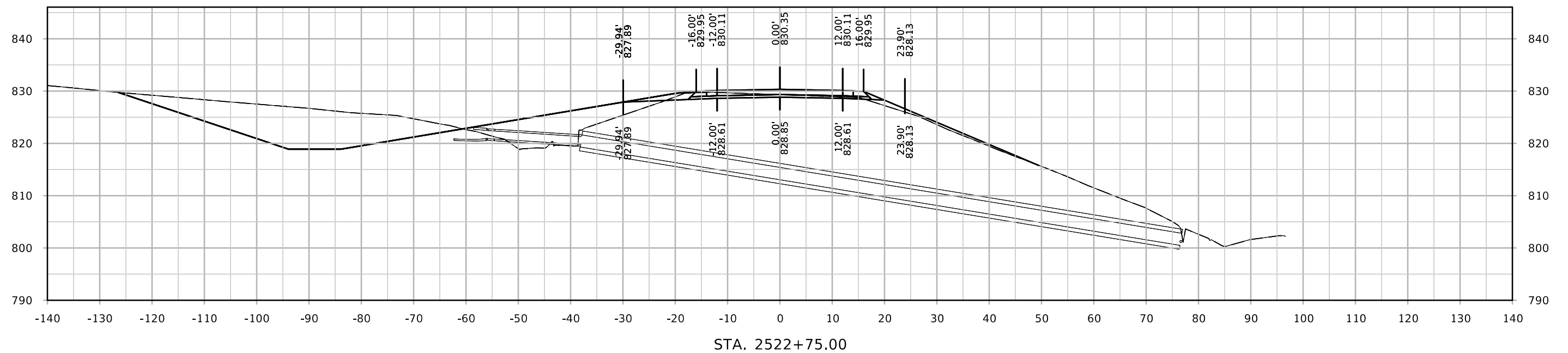
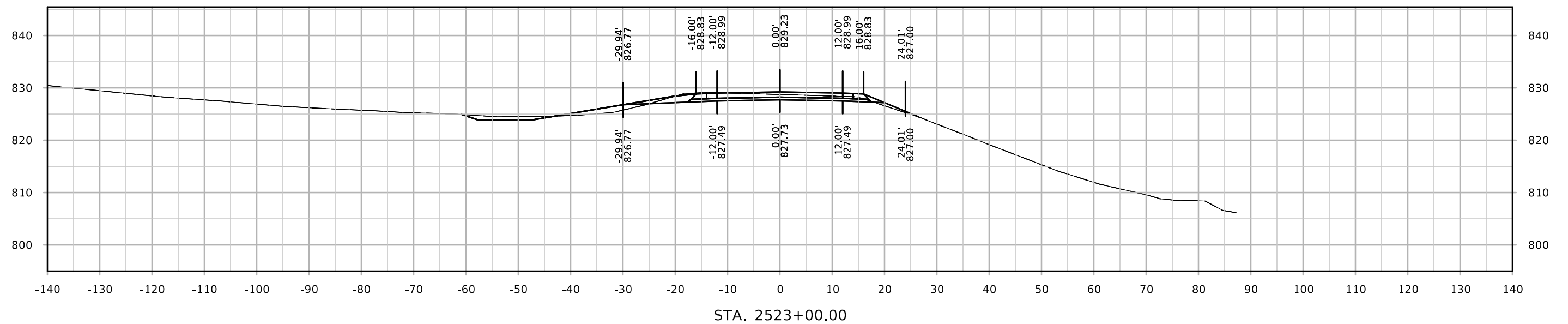
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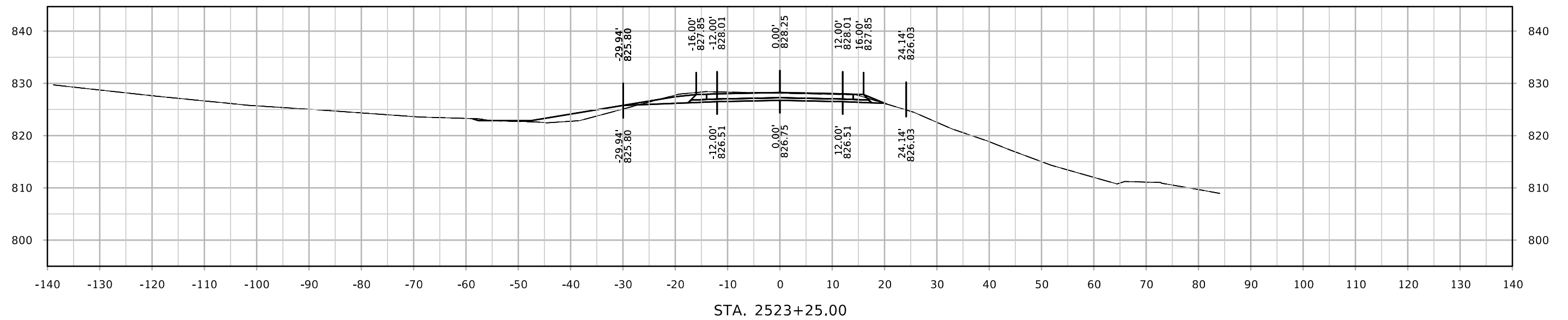
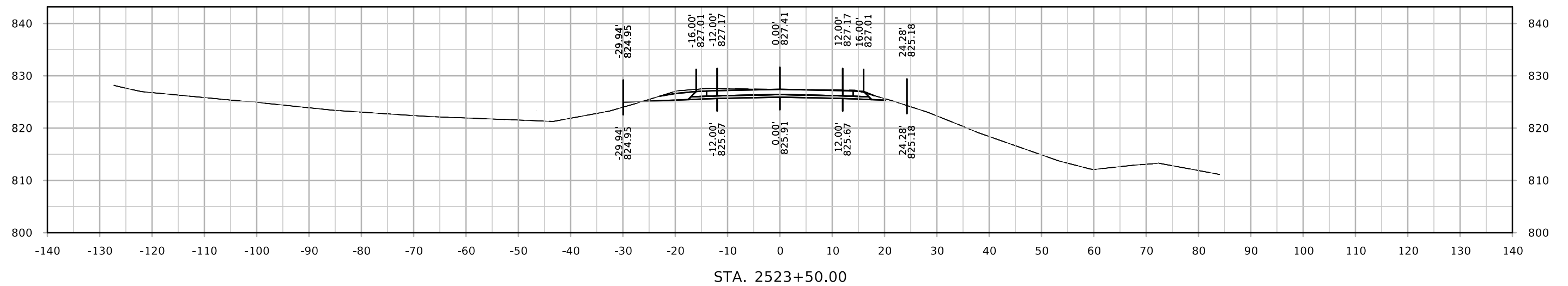
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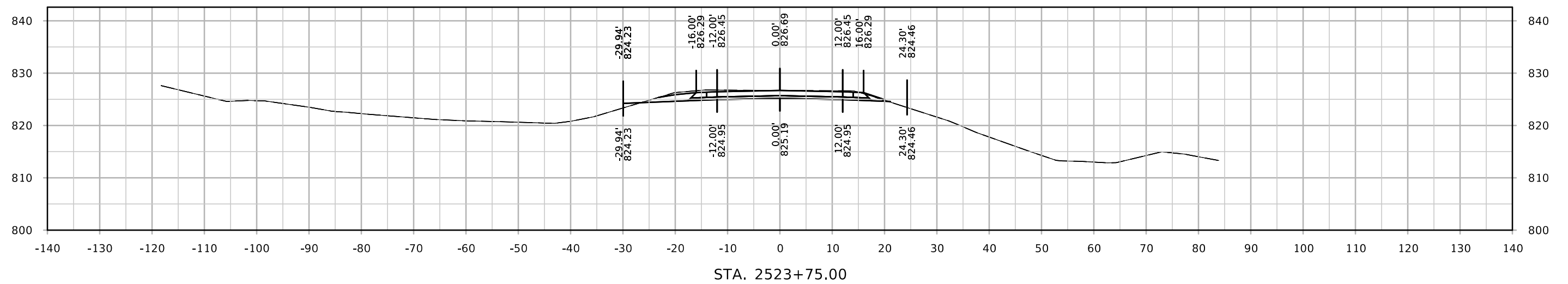
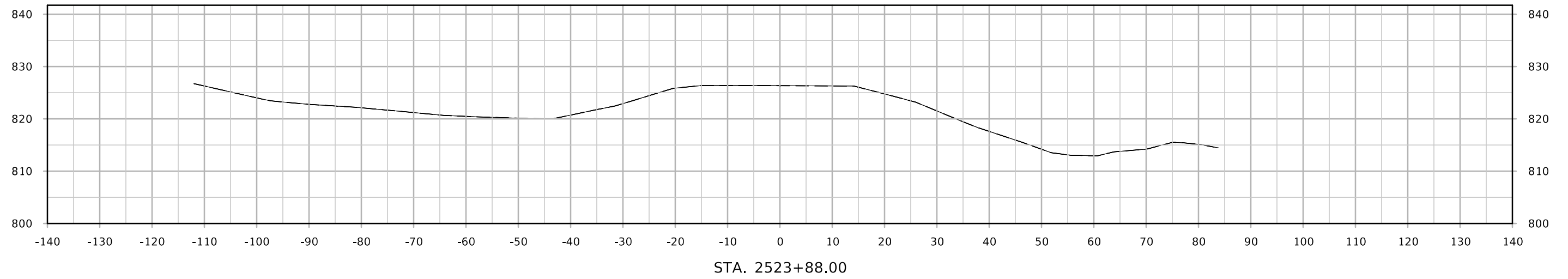
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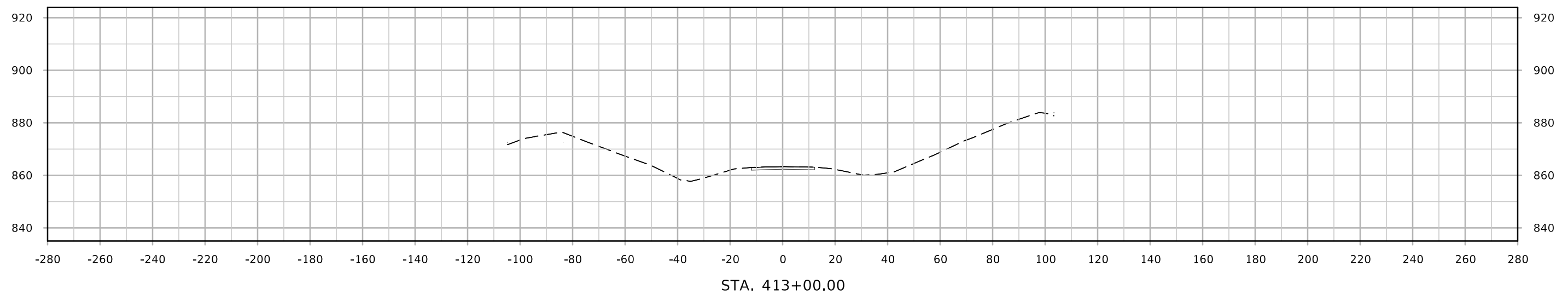
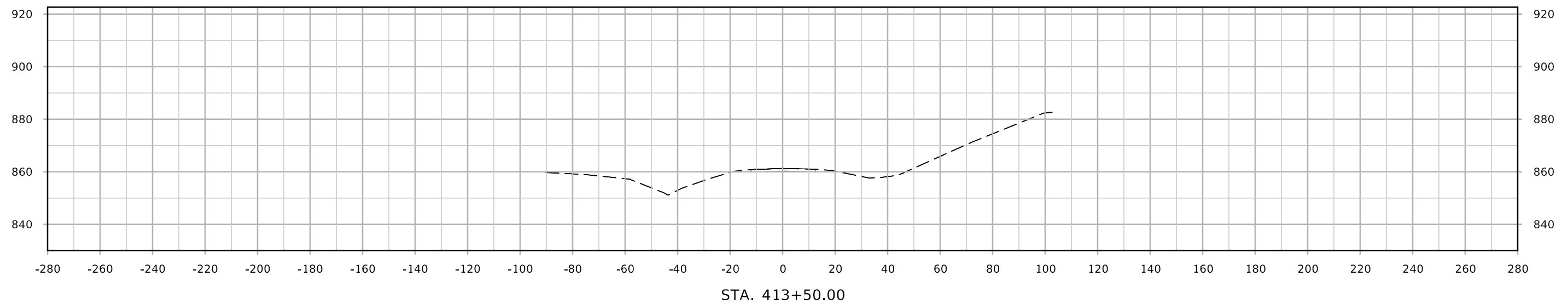


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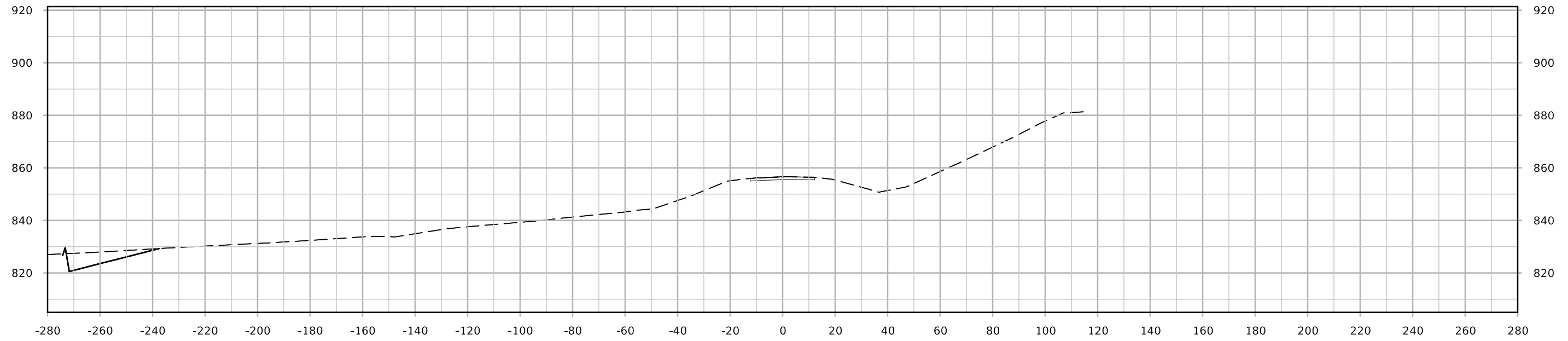


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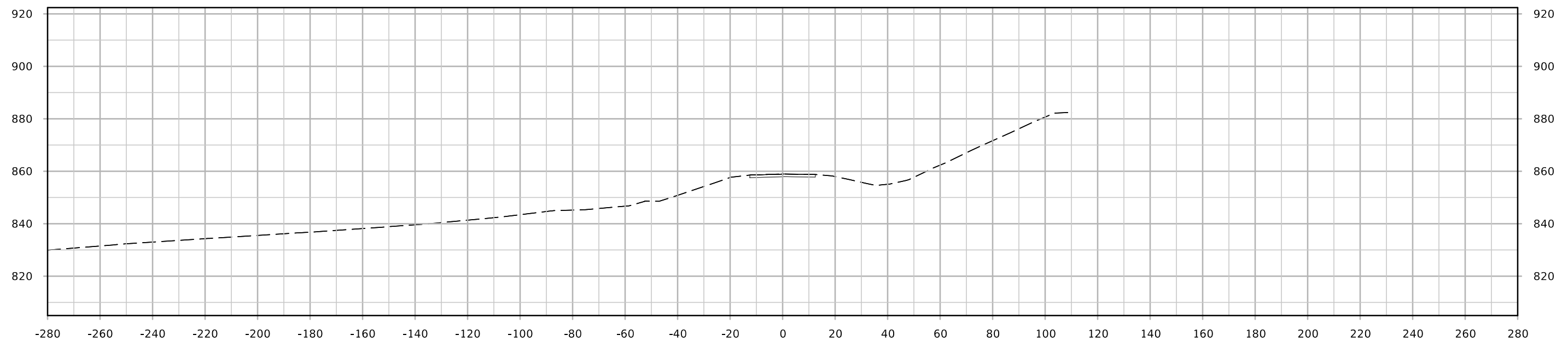




SR F-62



STA. 414+50.00



STA. 414+00.00

